Scientific & Technical Information Center
NPL Services for Examiners

My List - 0 Help

Search

Main Search | Advanced Keyword Search | Search History

Search: ISSN 0006-3002 GO Refine Search Return to results | Nex

> You're searching: Scientific and Technical Information Center

Item Information

Subscriptions
- Holdings

Browse Catalog

by title:
- Biochimica et biophy...

MARC Display

## Biochimica et biophysica acta. International journal of biochemistry and biophysics.

| | |
|---|---|
| Alt. Title: | BBA<br>International journal of biochemistry and biophysics |
| Imprint: | Amsterdam [etc.]: Elsevier/North Holland [etc.] 1947- |
| Notes: | Published intermittently in specialized sections.<br>Articles in English, French, or German, with summaries in English, French, and German. |
| ISSN: | 0006-3002 |
| Subjects: | Biological chemistry -- Periodicals.<br>Biophysics -- Periodicals. |
| Description: | v : ill.; 25 cm. |

Add to my list

### Copy/Holding information

| Collection | Call No. | Copy | Status |
|---|---|---|---|
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1140-1144 (Nov. 1992-Oct. 1993) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1145-1154 (Jan.-Dec. 1993) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1155-1164 (May-Nov. 1993) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1165-1174 (Nov. 1992-Nov. 1993) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1175-1182 (Dec. 1992-Oct. 1993) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1183-1188 (Nov-Dec 1993) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1189-1197 (Jan-Dec 1994) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1198-1201 (Jan-Dec 1994) c.1 | Available |

| | | | |
|---|---|---|---|
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1202-1209 (Sep 1993-Dec 1994) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1210-1215 (Dec 1993-Dec 1994) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1216-1219 (Oct 1993-Nov 1994) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1220-1227 (Nov 1993-Dec 1994) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1228-1238 (1995) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1239-1249 (1995) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1250-1260 (1995) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1261-1272 (1995) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1273-1285 (1996) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1286-1295 (1996) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1296-1306 (1996) c.1 | Available |
| Biotechnology and Chemical Library Microfilm | QD1 .B5 Microfilm | v.1307-1317 (1996) c.1 | Available |

More Results: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Next >>

Email: *maxine.brown@uspto.gov* to ask questions or make suggestions.

**Horizon Information Portal 3.0**

Brought to you by *Scientific and Technical Information Center*

ANSWER 9 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

AN 1995:30184 BIOSIS

DN PREV199598044484

TI Distribution of immunoreactive malondialdehyde-modified low-density lipoprotein in human serum.

AU Kotani, Kazuo [Reprint author]; Maekawa, Masato; Kanno, Takashi; Kondo, Akira; Toda, Naoko; Manabe, Mitsuhisa

CS Dep. Lab. Med., Hamamatsu Univ. Sch. Med., Hamamatsu, Handa-cho 3600, Shizuoka 431-31, Japan

SO Biochimica et Biophysica Acta, (1994) Vol. 1215, No. 1-2, pp. 121-125. CODEN: BBACAQ. ISSN: 0006-3002.

DT Article

LA English

ED Entered STN: 25 Jan 1995
Last Updated on STN: 25 Jan 1995

microfilm

AB We developed a sensitive enzyme-linked immunosorbent assay (ELISA) for detection of malondialdehyde-modified low-density lipoprotein (MDA-LDL) in human serum. A monoclonal antibody against MDA-LDL (ML25) used in our method recognized not only MDA-LDL but also other MDA-modified proteins. However, MDA-LDL was able to be detected specifically by using a combination of ML25 and an antibody specific for apolipoprotein B (apo B) (AB16), which was conjugated with beta-galactosidase. Using this method, measurable amounts of MDA-LDL were detected in the sera of 40 healthy individuals. MDA-LDL was observed to be mainly distributed in the human LDL fraction separated by density gradient ultracentrifugation, while in each lipoprotein subtraction the largest amount of MDA-LDL per protein was found at a subfraction between LDL and HDL. The particle size of LDL in this fraction was smaller than that of LDL in the main LDL fraction, as assessed by electrophoresis. In addition, LDL oxidized by Cu-2+ was also detectable with this method. We conclude that our method is sensitive and specific for MDA-LDL and might be useful for investigating MDA-LDL in the human circulation.

CC Clinical biochemistry - General methods and applications 10006
Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biochemistry studies - Carbohydrates 10068
Biochemistry studies - Minerals 10069
Biophysics - Molecular properties and macromolecules 10506
Enzymes - Methods 10804
Metabolism - Lipids 13006
Metabolism - Proteins, peptides and amino acids 13012
Blood - Blood and lymph studies 15002
Immunology - General and methods 34502

IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Clinical Chemistry (Allied Medical Sciences); Enzymology (Biochemistry and Molecular Biophysics); Immune System (Chemical Coordination and Homeostasis); Metabolism

IT Miscellaneous Descriptors
ANALYTICAL METHOD; COPPER OXIDIZED LOW DENSITY LIPOPROTEIN; ELISA; IMMUNOLOGIC METHOD; MONOCLONAL ANTIBODY AB16; MONOCLONAL ANTIBODY ML25; PARTICLE SIZE

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Hominidae
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

Scientific & Technical Information Center
NPL Services for Examiners

My List - 0 Help

Search

Main Search | Advanced Keyword Search | Search History

Search: ISSN 0276-5047 GO Refine Search

> You're searching: **Scientific and Technical Information Center**

Item Information

- Subscriptions

Browse Catalog

by title:

- Arteriosclerosis : a...

MARC Display

## Arteriosclerosis : an official journal of the American Heart Association, Inc.

| | |
|---|---|
| Alt. Title: | Journal of vascular biology and disease 1981-8 |
| Author: | American Heart Association. |
| Imprint: | Dallas, Tex. : The Association, [1981]-c1990. |
| Notes: | Cover title.<br>Microfilm. Ann Arbor, Mich. : University Microfilms International, microfilm cartridges ; 16 mm. |
| ISSN: | 0276-5047 |
| Subjects: | Arteriosclerosis -- Periodicals. |
| Description: | 10 v. : ill. ; 28 cm. |
| Continued by: | Arteriosclerosis and thrombosis |

Add to my list

### Subscription Summary

### US Patent & Trademark Office

**Location:** US Patent & Trademark Office
**Collection:** Biotechnology and Chemical Library Microfilm
**Call No.:** RC692 .A667 Microfilm
**Copy No.:** 1
**Status:** Not Currently Received
**Media Type:** film
**Notes:** Cancelled with Dec. 1999.

Email: *maxine.brown@uspto.gov* to ask questions or make suggestions.

**Horizon Information Portal 3.0**

Brought to you by *Scientific and Technical Information Center*

ANSWER 11 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

microfilm

AN 1990:328218 BIOSIS
DN PREV199090036237; BA90:36237
TI ANTISERA AND MONOCLONAL ANTIBODIES SPECIFIC FOR EPITOPES GENERATED DURING OXIDATIVE MODIFICATION OF LOW DENSITY LIPOPROTEIN.
AU PALINSKI W [Reprint author]; YLA-HERTTUALA S; ROSENFELD M E; BUTLER S W; SOCHER S A; PARTHASARATHY S; CURTISS L K; WITZTUM J L
CS DIV ENDOCRINOL METAB, DEP MED M-013D, UNIV CALIF SAN DIEGO, LA JOLLA, CALIF 92093, USA
SO Arteriosclerosis, (1990) Vol. 10, No. 3, pp. 325-335.
CODEN: ARTRDW. ISSN: 0276-5047.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 24 Jul 1990
Last Updated on STN: 24 Jul 1990
AB Increasing evidence indicates that low density lipoprotein (LDL) has to be modified to induce foam cell formation. One such modification, oxidation of LDL, generates a number of highly reactive short chain-length aldehydic fragments of oxidized fatty acids capable of conjugating with lysine residues of apoprotein B. By immunizing animals with homologous malondialdehyde-modified LDL (MDA-LDL), 4-hydroxynonenal-LDL (4-HNE-LDL), and Cu++-oxidized LDL, we developed polyvalent and monoclonal antibodies against three epitopes found in oxidatively modified LDL. The present article characterizes an antiserum and monoclonal antibody (MAL-2 and MDA2, respectively) specific for MDA-lysine, and an antiserum and monoclonal antibody (HNE-6 and NA59, respectively) specific for 4-HNE-lysine. In addition, a monoclonal antibody (OLF4-3C10) was developed against an as yet undefined epitope generated during Cu++ oxidation of LDL. With these antibodies, we demonstrated that MDA-lysine and 4-HNE-lysine adducts develop on apo-lipoprotein B during copper-induced oxidation of LDL in vitro. The application of these antibodies for immunocytochemical demonstration of oxidized lipoproteins in atherosclerotic lesions of progressive severity is described in the companion article. These antibodies should prove useful in studying the role of oxidatively modified lipoproteins as well as other oxidatively modified proteins in atherogenesis.
CC Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biochemistry studies - Sterols and steroids 10067
Biochemistry studies - Minerals 10069
Pathology - Diagnostic 12504
Pathology - Therapy 12512
Metabolism - Energy and respiratory metabolism 13003
Metabolism - Lipids 13006
Metabolism - Sterols and steroids 13008
Metabolism - Proteins, peptides and amino acids 13012
Metabolism - Metabolic disorders 13020
Cardiovascular system - Blood vessel pathology 14508
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Blood - Lymphatic tissue and reticuloendothelial system 15008
Routes of immunization, infection and therapy 22100
Immunology - General and methods 34502
IT Major Concepts
Blood and Lymphatics (Transport and Circulation); Cardiovascular Medicine (Human Medicine, Medical Sciences); Immune System (Chemical Coordination and Homeostasis); Metabolism; Pathology
IT Miscellaneous Descriptors
HUMAN GUINEA-PIG GOAT 4 HYDROXYNONENAL LOW DENSITY LIPOPROTEIN MALONDIALDEHYDE-MODIFIED LOW

ANSWER 11 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

AN 1990:328218 BIOSIS

DN PREV199090036237; BA90:36237

TI ANTISERA AND MONOCLONAL ANTIBODIES SPECIFIC FOR EPITOPES GENERATED DURING OXIDATIVE MODIFICATION OF LOW DENSITY LIPOPROTEIN.

AU PALINSKI W [Reprint author]; YLA-HERTTUALA S; ROSENFELD M E; BUTLER S W; SOCHER S A; PARTHASARATHY S; CURTISS L K; WITZTUM J L

CS DIV ENDOCRINOL METAB, DEP MED M-013D, UNIV CALIF SAN DIEGO, LA JOLLA, CALIF 92093, USA

SO Arteriosclerosis, (1990) Vol. 10, No. 3, pp. 325-335.
CODEN: ARTRDW. ISSN: 0276-5047.

DT Article

FS BA

LA ENGLISH

ED Entered STN: 24 Jul 1990
Last Updated on STN: 24 Jul 1990

AB Increasing evidence indicates that low density lipoprotein (LDL) has to be modified to induce foam cell formation. One such modification, oxidation of LDL, generates a number of highly reactive short chain-length aldehydic fragments of oxidized fatty acids capable of conjugating with lysine residues of apoprotein B. By immunizing animals with homologous malondialdehyde-modified LDL (MDA-LDL), 4-hydroxynonenal-LDL (4-HNE-LDL), and Cu++-oxidized LDL, we developed polyvalent and monoclonal antibodies against three epitopes found in oxidatively modified LDL. The present article characterizes an antiserum and monoclonal antibody (MAL-2 and MDA2, respectively) specific for MDA-lysine, and an antiserum and monoclonal antibody (HNE-6 and NA59, respectively) specific for 4-HNE-lysine. In addition, a monoclonal antibody (OLF4-3C10) was developed against an as yet undefined epitope generated during Cu++ oxidation of LDL. With these antibodies, we demonstrated that MDA-lysine and 4-HNE-lysine adducts develop on apo-lipoprotein B during copper-induced oxidation of LDL in vitro. The application of these antibodies for immunocytochemical demonstration of oxidized lipoproteins in atherosclerotic lesions of progressive severity is described in the companion article. These antibodies should prove useful in studying the role of oxidatively modified lipoproteins as well as other oxidatively modified proteins in atherogenesis.

CC Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biochemistry studies - Sterols and steroids 10067
Biochemistry studies - Minerals 10069
Pathology - Diagnostic 12504
Pathology - Therapy 12512
Metabolism - Energy and respiratory metabolism 13003
Metabolism - Lipids 13006
Metabolism - Sterols and steroids 13008
Metabolism - Proteins, peptides and amino acids 13012
Metabolism - Metabolic disorders 13020
Cardiovascular system - Blood vessel pathology 14508
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Blood - Lymphatic tissue and reticuloendothelial system 15008
Routes of immunization, infection and therapy 22100
Immunology - General and methods 34502

IT Major Concepts
Blood and Lymphatics (Transport and Circulation); Cardiovascular Medicine (Human Medicine, Medical Sciences); Immune System (Chemical Coordination and Homeostasis); Metabolism; Pathology

IT Miscellaneous Descriptors
HUMAN GUINEA-PIG GOAT 4 HYDROXYNONENAL LOW DENSITY LIPOPROTEIN MALONDIALDEHYDE-MODIFIED LOW

DENSITY LIPOPROTEIN COPPER-OXIDIZED
LOW DENSITY LIPOPROTEIN FATTY ACID LYSINE
APOPROTEIN B FOAM CELL FORMATION HYPERCHOLESTEROLEMIA ATHEROSCLEROSIS
IMMUNOCYTOCHEMISTRY IMMUNIZATION

ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ORGN Classifier
Caviidae 86300
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

RN 75899-68-2 (4-HYDROXYNONENAL)
542-78-9 (MALONDIALDEHYDE)
56-87-1Q (LYSINE)
70-54-2Q (LYSINE)

DENSITY LIPOPROTEIN COPPER-OXIDIZED
LOW DENSITY LIPOPROTEIN FATTY ACID LYSINE
APOPROTEIN B FOAM CELL FORMATION HYPERCHOLESTEROLEMIA ATHEROSCLEROSIS
IMMUNOCYTOCHEMISTRY IMMUNIZATION

ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ORGN Classifier
Caviidae 86300
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

RN 75899-68-2 (4-HYDROXYNONENAL)
542-78-9 (MALONDIALDEHYDE)
56-87-1Q (LYSINE)
70-54-2Q (LYSINE)

Scientific & Technical Information Center
NPL Services for Examiners

My List - 0 Help

Search

Main Search | Advanced Keyword Search | Search History

Search: ISSN 0742-3071 GO Refine Search

> You're searching: Scientific and Technical Information Center

Item Information

- Holdings

Browse Catalog

by title:

- Diabetic medicine [e...

MARC Display

## Diabetic medicine [electronic resource].

Author: British Diabetic Association

Imprint: [Oxford] : Blackwell Science,

URL: http://search.epnet.com/direct.asp?db=aph&jid=%22F07%22&scope=site Click here for Online version via Academic Search Premium (ASP). Jan 1999-

Notes: Available on ADONIS, v. 8, no. 1 (1991) - v. 19, no. 12 (2002)
Electronic journal articles are available in portable document format (PDF). Abstracts are in HTML format.
Electronic version of: Diabetic medicine.
System requirements: World Wide Web browser, Internet connectivity, and Adobe Acrobat reader.
Mode of access: World Wide Web.
Journal of the British Diabetic Association.

ISSN: 0742-3071

Subjects: Diabetes. -- Periodicals.

Add to my list

### Copy/Holding information

| Collection | Call No. | Copy | Status |
|---|---|---|---|
| Electronic | e-journal | Jan 1999- | Available |

Email: *maxine.brown@uspto.gov* to ask questions or make suggestions.

**Horizon Information Portal 3.0**

Brought to you by *Scientific and Technical Information Center*

ANSWER 14 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

AN 97281078 EMBASE

DN 1997281078

TI Autoantibodies to oxidized low density lipoprotein: The relationship to low density lipoprotein fatty acid composition in diabetes.

AU Griffin M.E.; McInerney D.; Fraser A.; Johnson A.H.; Collins P.B.; Owens D.; Tomkin G.H.

CS Prof. G.H. Tomkin, 1, Fitzwilliam Square, Dublin 2, Ireland

SO Diabetic Medicine, (1997) Vol. 14, No. 9, pp. 741-747. .
Refs: 34
ISSN: 0742-3071 CODEN: DIMEEV

CY United Kingdom

DT Journal; Article

FS 006 Internal Medicine
018 Cardiovascular Diseases and Cardiovascular Surgery
029 Clinical Biochemistry

LA English

SL English

ED Entered STN: 2 Oct 1997
Last Updated on STN: 2 Oct 1997

AB Autoantibodies to oxidized low density lipoprotein have been shown to be an independent predictor of the progression of carotid atherosclerosis. This study examines the relationship between low density lipoprotein fatty acid composition and autoantibodies to both malondialdehyde-modified and copper-oxidized low density lipoprotein in non-diabetic patients with (n = 17), and without (n = 18), definite evidence of previous myocardial infarction. The third group were non-insulin-dependent diabetic patients with no evidence of atherosclerosis (n = 15) and the fourth group were patients with non-insulin-dependent diabetes (n = 17) who had definite evidence of previous myocardial infarction. Fatty acids were measured by gas-liquid chromatography. Antibodies to malondialdehyde-modified low density lipoprotein and copper-oxidized low density lipoprotein were determined by an ELISA method. Autoantibodies to copper-oxidized low density lipoprotein were significantly higher in the non-diabetic patients with heart disease when compared to any other group ($p < 0.05$). Autoantibodies to malondialdehyde-modified low density lipoprotein were significantly higher in the non-diabetic subjects with heart disease and in both diabetic groups compared to non-diabetic subjects without coronary heart disease ($p < 0.05$). Linoleic acid (%) in low density lipoprotein did not differ between groups but arachidonic acid (%) was significantly lower in both diabetic and non- diabetic patients with coronary heart disease ($p < 0.05$). The diabetic patients with low antibodies had 39.6 ± 2.2% polyunsaturated fatty acids in their low density lipoprotein while diabetic patients with high antibodies had 46.7 ± 1.2% polyunsaturates in their low density lipoprotein ($p < 0.01$). This study confirms the association between antibodies to oxidized low density lipoprotein and coronary heart disease and shows raised low density lipoprotein antibody levels in diabetic patients with and without demonstrable atherosclerosis. In the diabetic patients, those with high antibody levels had high polyunsaturated fatty acid levels in their LDL suggesting a possible role for dietary intervention.

CT Medical Descriptors:
*heart infarction
*lipid composition
*non insulin dependent diabetes mellitus
adult

aged
article
atherosclerosis
controlled study
female
human
ischemic heart disease
lipid oxidation
major clinical study
male
Drug Descriptors:
*autoantibody: EC, endogenous compound
*copper
*fatty acid: EC, endogenous compound
*malonaldehyde
*oxidized low density lipoprotein: EC, endogenous compound
arachidonic acid: EC, endogenous compound
linoleic acid: EC, endogenous compound
polyunsaturated fatty acid: EC, endogenous compound
RN (copper) 15158-11-9, 7440-50-8; (malonaldehyde) 542-78-9; (arachidonic acid) 506-32-1, 6610-25-9, 7771-44-0; (linoleic acid) 1509-85-9, 2197-37-7, 60-33-3, 822-17-3

=>

10/802,643
Book 8/10/06

```
d his

     (FILE 'HOME' ENTERED AT 16:48:51 ON 09 AUG 2006)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 16:49:10 ON 09
     AUG 2006
L1         25065 S (ASSOCIAT? CONSTANT)
L2             3 S L1 AND  MDA?
L3             3 S L1 AND MDA?
L4          1208 S L1 AND OXID?
L5             0 S L3 AND L4
L6             2 DUPLICATE REMOVE L3 (1 DUPLICATE REMOVED)
L7            62 S L1 AND LDL?
L8             0 S L7 AND MDA?
L9             8 S L7 AND OXI?
L10            2 DUPLICATE REMOVE L9 (6 DUPLICATES REMOVED)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 17:09:23 ON 09
     AUG 2006
L11         2180 S (ASSOCIAT? CONSTANT) AND ANTIBOD?
L12          262 S L1 AND OPTIMI?
L13            5 S L12 AND REVIEW?
L14            2 DUPLICATE REMOVE L13 (3 DUPLICATES REMOVED)
L15          222 S L1 AND REVIEW?
L16            0 S L1 AND ML25
L17           19 S L15 AND ANTIBOD?
L18           16 DUPLICATE REMOVE L17 (3 DUPLICATES REMOVED)

=>
```

```
d his

     (FILE 'HOME' ENTERED AT 16:48:51 ON 09 AUG 2006)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 16:49:10 ON 09
     AUG 2006
L1        25065 S (ASSOCIAT? CONSTANT)
L2            3 S L1 AND  MDA?
L3            3 S L1 AND MDA?
L4         1208 S L1 AND OXID?
L5            0 S L3 AND L4
L6            2 DUPLICATE REMOVE L3 (1 DUPLICATE REMOVED)
L7           62 S L1 AND LDL?
L8            0 S L7 AND MDA?
L9            8 S L7 AND OXI?
L10           2 DUPLICATE REMOVE L9 (6 DUPLICATES REMOVED)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 17:09:23 ON 09
     AUG 2006
L11        2180 S (ASSOCIAT? CONSTANT) AND ANTIBOD?
L12         262 S L1 AND OPTIMI?
L13           5 S L12 AND REVIEW?
L14           2 DUPLICATE REMOVE L13 (3 DUPLICATES REMOVED)
L15         222 S L1 AND REVIEW?
L16           0 S L1 AND ML25
L17          19 S L15 AND ANTIBOD?
L18          16 DUPLICATE REMOVE L17 (3 DUPLICATES REMOVED)

=>
```

```
d his

     (FILE 'HOME' ENTERED AT 16:48:51 ON 09 AUG 2006)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 16:49:10 ON 09
     AUG 2006
L1         25065 S (ASSOCIAT? CONSTANT)
L2             3 S L1 AND  MDA?
L3             3 S L1 AND MDA?
L4          1208 S L1 AND OXID?
L5             0 S L3 AND L4
L6             2 DUPLICATE REMOVE L3 (1 DUPLICATE REMOVED)
L7            62 S L1 AND LDL?
L8             0 S L7 AND MDA?
L9             8 S L7 AND OXI?
L10            2 DUPLICATE REMOVE L9 (6 DUPLICATES REMOVED)

=>
```

ANSWER 42 OF 50 MEDLINE on STN

AN 95323498 MEDLINE

DN PubMed ID: 7541296

TI Immunologic detection and measurement of hypochlorite-modified LDL with specific monoclonal antibodies.

AU Malle E; Hazell L; Stocker R; Sattler W; Esterbauer H; Waeg G

CS Karl-Franzens University, Institutes of Medical Biochemistry, Graz, Austria.

SO Arteriosclerosis, thrombosis, and vascular biology, (1995 Jul) Vol. 15, No. 7, pp. 982-9.
Journal code: 9505803. ISSN: 1079-5642.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199508

ED Entered STN: 22 Aug 1995
Last Updated on STN: 3 Feb 1997
Entered Medline: 10 Aug 1995

AB Oxidation of LDL is thought to contribute to the early stages of atherogenesis. Because myeloperoxidase is present in atherosclerotic lesions and can produce the strong oxidant hypochlorous acid (HOCl), which converts LDL into its high-uptake atherogenic form in vitro, we raised polyclonal and monoclonal antibodies (MoAbs) against HOCl-modified LDL (HOCl-LDL). Characterization of the polyclonal anti-human HOCl-LDL Abs showed that they cross-reacted strongly with 4-hydroxynonenal-, malondialdehyde-, and Cu(2+)-oxidized LDL. Similarly, polyclonal and some monoclonal Abs against aldehyde- and Cu(2+)-modified LDL cross-reacted with HOCl-LDL. In contrast to the polyclonal Abs, two selected hybridoma cell line supernatants containing MoAbs raised against HOCl-LDL (MoAb-A and MoAb-B) did not cross-react with either native LDL or aldehyde- or Cu(2+)-modified LDL. MoAb-A (clone 1B10A11, subtype IgG1 kappa) recognized an epitope that appeared to be specific for HOCl-LDL and depended on the tertiary structure of the (lipo)protein, as judged by a lack of cross-reactivity with HOCl-modified human and bovine serum albumin and a loss of reactivity associated with lipoprotein denaturation. MoAb-B (clone 2D10G9, subtype IgG2b kappa), on the other hand, gave identical titration curves with HOCl-LDL and HOCl-modified albumins, suggesting that this antibody recognized epitopes that are commonly generated on proteins that have been oxidized with HOCl. Thus, MoAb-A and MoAb-B may be useful tools for the investigation of a possible role for HOCl-mediated damage to (lipo)proteins in atherosclerosis and other inflammatory diseases.

CT Aldehydes: PD, pharmacology
Animals
*Antibodies, Monoclonal
Antibodies, Monoclonal: IM, immunology
Antibody Specificity
Binding, Competitive
Blotting, Western
Copper: PD, pharmacology
*Enzyme-Linked Immunosorbent Assay
Epitopes: IM, immunology
*Hypochlorous Acid: PD, pharmacology
Kinetics
*Lipoproteins, LDL: AN, analysis
Lipoproteins, LDL: CH, chemistry
Rabbits
Research Support, Non-U.S. Gov't
Serum Albumin: IM, immunology

RN 7440-50-8 (Copper); 7790-92-3 (Hypochlorous Acid)

CN 0 (Aldehydes); 0 (Antibodies, Monoclonal); 0 (Epitopes); 0

ANSWER 42 OF 50 MEDLINE on STN

AN 95323498 MEDLINE

DN PubMed ID: 7541296

TI Immunologic detection and measurement of hypochlorite-modified LDL with specific monoclonal antibodies.

AU Malle E; Hazell L; Stocker R; Sattler W; Esterbauer H; Waeg G

CS Karl-Franzens University, Institutes of Medical Biochemistry, Graz, Austria.

SO Arteriosclerosis, thrombosis, and vascular biology, (1995 Jul) Vol. 15, No. 7, pp. 982-9.
Journal code: 9505803. ISSN: 1079-5642.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199508

ED Entered STN: 22 Aug 1995
Last Updated on STN: 3 Feb 1997
Entered Medline: 10 Aug 1995

AB Oxidation of LDL is thought to contribute to the early stages of atherogenesis. Because myeloperoxidase is present in atherosclerotic lesions and can produce the strong oxidant hypochlorous acid (HOCl), which converts LDL into its high-uptake atherogenic form in vitro, we raised polyclonal and monoclonal antibodies (MoAbs) against HOCl-modified LDL (HOCl-LDL). Characterization of the polyclonal anti-human HOCl-LDL Abs showed that they cross-reacted strongly with 4-hydroxynonenal-, malondialdehyde-, and Cu(2+)-oxidized LDL. Similarly, polyclonal and some monoclonal Abs against aldehyde- and Cu(2+)-modified LDL cross-reacted with HOCl-LDL. In contrast to the polyclonal Abs, two selected hybridoma cell line supernatants containing MoAbs raised against HOCl-LDL (MoAb-A and MoAb-B) did not cross-react with either native LDL or aldehyde- or Cu(2+)-modified LDL. MoAb-A (clone 1B10A11, subtype IgG1 kappa) recognized an epitope that appeared to be specific for HOCl-LDL and depended on the tertiary structure of the (lipo)protein, as judged by a lack of cross-reactivity with HOCl-modified human and bovine serum albumin and a loss of reactivity associated with lipoprotein denaturation. MoAb-B (clone 2D10G9, subtype IgG2b kappa), on the other hand, gave identical titration curves with HOCl-LDL and HOCl-modified albumins, suggesting that this antibody recognized epitopes that are commonly generated on proteins that have been oxidized with HOCl. Thus, MoAb-A and MoAb-B may be useful tools for the investigation of a possible role for HOCl-mediated damage to (lipo)proteins in atherosclerosis and other inflammatory diseases.

CT Aldehydes: PD, pharmacology
Animals
*Antibodies, Monoclonal
Antibodies, Monoclonal: IM, immunology
Antibody Specificity
Binding, Competitive
Blotting, Western
Copper: PD, pharmacology
*Enzyme-Linked Immunosorbent Assay
Epitopes: IM, immunology
*Hypochlorous Acid: PD, pharmacology
Kinetics
*Lipoproteins, LDL: AN, analysis
Lipoproteins, LDL: CH, chemistry
Rabbits
Research Support, Non-U.S. Gov't
Serum Albumin: IM, immunology

RN 7440-50-8 (Copper); 7790-92-3 (Hypochlorous Acid)

CN 0 (Aldehydes); 0 (Antibodies, Monoclonal); 0 (Epitopes); 0

(Lipoproteins, LDL); 0 (Serum Albumin)

(Lipoproteins, LDL); 0 (Serum Albumin)

ANSWER 37 OF 50 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 23

AN 1996:439009 BIOSIS

DN PREV199699152615

TI Cloning of monoclonal autoantibodies to epitopes of oxidized lipoproteins from apolipoprotein E-deficient mice: Demonstration of epitopes of oxidized low density lipoprotein in human plasma.

AU Palinski, Wulf [Reprint author]; Horkko, Sohvi; Miller, Elizabeth; Steinbrecher, Urs P.; Powell, Henry C.; Curtiss, Linda K.; Witztum, Joseph L.

CS Dep. Med., 0682, Univ. California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0682, USA

SO Journal of Clinical Investigation, (1996) Vol. 98, No. 3, pp. 800-814. CODEN: JCINAO. ISSN: 0021-9738.

DT Article

LA English

ED Entered STN: 26 Sep 1996
Last Updated on STN: 26 Sep 1996

AB Many reactive products may be formed when LDL undergoes lipid peroxidation, which in turn can react with lipids, apoproteins, and proteins, generating immunogenic neoepitopes. Autoantibodies recognizing model epitopes of oxidized low density lipoprotein, such as malondialdehyde-lysine, occur in plasma and in atherosclerotic lesions of humans and animals. Because apo E-deficient mice develop particularly high titers of such autoantibodies, we used their spleens to clone 13 monoclonal antibodies to various epitopes of oxidized LDL ("EO antibodies").
Binding and competitive RIAs demonstrated significant differences in fine specificity even between EO antibodies initially selected for binding to the same screening antigen. For example, some EO antibodies selected for binding to malondialdehyde-LDL also recognized copper oxidized LDL, acrolein-LDL, or LDL modified by arachidonic or linoleic acid oxidation products. Circulating IgG and IgM autoantibodies binding to copper-oxidized LDL. 4-hydroxynonenal-LDL, acrolein-LDL, and LDL modified with arachidonic or linoleic acid oxidation products were found in apo E-deficient mice, suggesting that the respective antigens are formed in vivo. Epitopes recognized by some of the EO monoclonal antibodies were also found on human circulating LDL. Each of the EO monoclonal antibodies immunostained rabbit and human atherosclerotic lesions, and some of them yielded distinct staining patterns in advanced lesions. Together, this suggests that the natural monoclonal antibodies recognize different epitopes of complex structures formed during oxidation of lipoproteins, or epitopes formed independently at different lesion sites. Our data demonstrate that a profound immunological response to a large number of different epitopes of oxidized lipoproteins occurs in vivo. The availability of "natural" monoclonal autoantibodies should facilitate the identification of specific epitopes inducing this response.

CC Cytology - Animal 02506
Cytology - Human 02508
Genetics - Animal 03506
Genetics - Human 03508
Biochemistry - Gases 10012
Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry methods - Lipids 10056
Biochemistry methods - Carbohydrates 10058
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biochemistry studies - Carbohydrates 10068
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506

ANSWER 37 OF 50 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 23

AN 1996:439009 BIOSIS

DN PREV199699152615

TI Cloning of monoclonal autoantibodies to epitopes of oxidized lipoproteins from apolipoprotein E-deficient mice: Demonstration of epitopes of oxidized low density lipoprotein in human plasma.

AU Palinski, Wulf [Reprint author]; Horkko, Sohvi; Miller, Elizabeth; Steinbrecher, Urs P.; Powell, Henry C.; Curtiss, Linda K.; Witztum, Joseph L.

CS Dep. Med., 0682, Univ. California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0682, USA

SO Journal of Clinical Investigation, (1996) Vol. 98, No. 3, pp. 800-814. CODEN: JCINAO. ISSN: 0021-9738.

DT Article

LA English

ED Entered STN: 26 Sep 1996
Last Updated on STN: 26 Sep 1996

AB Many reactive products may be formed when LDL undergoes lipid peroxidation, which in turn can react with lipids, apoproteins, and proteins, generating immunogenic neoepitopes. Autoantibodies recognizing model epitopes of oxidized low density lipoprotein, such as malondialdehyde-lysine, occur in plasma and in atherosclerotic lesions of humans and animals. Because apo E-deficient mice develop particularly high titers of such autoantibodies, we used their spleens to clone 13 monoclonal antibodies to various epitopes of oxidized LDL ("EO antibodies").
Binding and competitive RIAs demonstrated significant differences in fine specificity even between EO antibodies initially selected for binding to the same screening antigen. For example, some EO antibodies selected for binding to malondialdehyde-LDL also recognized copper oxidized LDL, acrolein-LDL, or LDL modified by arachidonic or linoleic acid oxidation products. Circulating IgG and IgM autoantibodies binding to copper-oxidized LDL. 4-hydroxynonenal-LDL, acrolein-LDL, and LDL modified with arachidonic or linoleic acid oxidation products were found in apo E-deficient mice, suggesting that the respective antigens are formed in vivo. Epitopes recognized by some of the EO monoclonal antibodies were also found on human circulating LDL. Each of the EO monoclonal antibodies immunostained rabbit and human atherosclerotic lesions, and some of them yielded distinct staining patterns in advanced lesions. Together, this suggests that the natural monoclonal antibodies recognize different epitopes of complex structures formed during oxidation of lipoproteins, or epitopes formed independently at different lesion sites. Our data demonstrate that a profound immunological response to a large number of different epitopes of oxidized lipoproteins occurs in vivo. The availability of "natural" monoclonal autoantibodies should facilitate the identification of specific epitopes inducing this response.

CC Cytology - Animal 02506
Cytology - Human 02508
Genetics - Animal 03506
Genetics - Human 03508
Biochemistry - Gases 10012
Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry methods - Lipids 10056
Biochemistry methods - Carbohydrates 10058
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biochemistry studies - Carbohydrates 10068
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506

Biophysics - Membrane phenomena 10508
Metabolism - General metabolism and metabolic pathways 13002
Cardiovascular system - Anatomy 14502
Cardiovascular system - Physiology and biochemistry 14504
Cardiovascular system - Blood vessel pathology 14508
Development and Embryology - Morphogenesis 25508
Immunology - General and methods 34502
Immunology - Immunopathology, tissue immunology 34508

IT Major Concepts
Biochemistry and Molecular Biophysics; Cardiovascular Medicine (Human Medicine, Medical Sciences); Cardiovascular System (Transport and Circulation); Cell Biology; Clinical Endocrinology (Human Medicine, Medical Sciences); Development; Genetics; Immune System (Chemical Coordination and Homeostasis); Membranes (Cell Biology); Metabolism

IT Miscellaneous Descriptors
ATHEROSCLEROSIS; IMMUNE SYSTEM

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Hominidae
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ORGN Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Muridae
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

Biophysics - Membrane phenomena 10508
Metabolism - General metabolism and metabolic pathways 13002
Cardiovascular system - Anatomy 14502
Cardiovascular system - Physiology and biochemistry 14504
Cardiovascular system - Blood vessel pathology 14508
Development and Embryology - Morphogenesis 25508
Immunology - General and methods 34502
Immunology - Immunopathology, tissue immunology 34508

IT Major Concepts
Biochemistry and Molecular Biophysics; Cardiovascular Medicine (Human Medicine, Medical Sciences); Cardiovascular System (Transport and Circulation); Cell Biology; Clinical Endocrinology (Human Medicine, Medical Sciences); Development; Genetics; Immune System (Chemical Coordination and Homeostasis); Membranes (Cell Biology); Metabolism

IT Miscellaneous Descriptors
ATHEROSCLEROSIS; IMMUNE SYSTEM

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Hominidae
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ORGN Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Muridae
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

```
d his

     (FILE 'HOME' ENTERED AT 17:38:17 ON 09 AUG 2006)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 17:38:36 ON 09
     AUG 2006
L1           135 S 4E6?
L2           307 S 8A2?
L3             1 S L1 AND L2
L4            94 S L1 AND ANTIBOD?
L5            40 DUPLICATE REMOVE L4 (54 DUPLICATES REMOVED)
L6           178 S L2 AND ANTIBOD?
L7            59 DUPLICATE REMOVE L6 (119 DUPLICATES REMOVED)
L8             3 S L7 AND LDL
L9            14 S L5 AND LDL
L10        45188 S MALONDIALDEHYDE?
L11        28083 S L10 AND OX?
L12         2202 S L11 AND LDL?
L13          572 S L12 AND ANTIBOD?
L14          128 S L13 AND BIND?
L15           50 DUPLICATE REMOVE L14 (78 DUPLICATES REMOVED)

=>
```

d his

(FILE 'HOME' ENTERED AT 17:38:17 ON 09 AUG 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 17:38:36 ON 09 AUG 2006

```
L1          135 S 4E6?
L2          307 S 8A2?
L3            1 S L1 AND L2
L4           94 S L1 AND ANTIBOD?
L5           40 DUPLICATE REMOVE L4 (54 DUPLICATES REMOVED)
L6          178 S L2 AND ANTIBOD?
L7           59 DUPLICATE REMOVE L6 (119 DUPLICATES REMOVED)
L8            3 S L7 AND LDL
L9           14 S L5 AND LDL
L10       45188 S MALONDIALDEHYDE?
L11       28083 S L10 AND OX?
L12        2202 S L11 AND LDL?
L13         572 S L12 AND ANTIBOD?
L14         128 S L13 AND BIND?
L15          50 DUPLICATE REMOVE L14 (78 DUPLICATES REMOVED)
```

=>

10/802,643
L/Cook 8/10/06

```
d his

     (FILE 'HOME' ENTERED AT 19:02:11 ON 09 AUG 2006)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 19:02:32 ON 09
     AUG 2006
L1            50 S (ANTIBOD? ASSOCIATION CONSTANT)
L2             0 S L1 AND REVIEW?
L3            30 DUPLICATE REMOVE L1 (20 DUPLICATES REMOVED)
L4            25 S L3 AND PD<1998
L5             0 S L4 NOT L3
L6             5 S L3 NOT L4
L7          1313 S OXLDL AND ANTIBOD?
L8           170 S L7 AND MALONDIALDEHYDE?
L9          5480 S (ANTIBOD? CROSS REACT?)
L10            1 S L7 AND L9
L11           26 S L9 AND LDL?
L12            8 DUPLICATE REMOVE L11 (18 DUPLICATES REMOVED)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 19:25:52 ON 09
     AUG 2006
L13          222 S (ASSOCIATION CONSTANT) AND REVIEW?
L14          178 DUPLICATE REMOVE L13 (44 DUPLICATES REMOVED)
L15           16 S L14 AND ANTIBOD?
L16       548879 S (MONOCLONAL ANTIBOD?)
L17          792 S L16 AND (ASSOCIATION CONSTANT?)
L18            2 S L17 AND REVIEW?
L19            1 S (OPTIM? ASSOCIATION CONSTANT)
L20            2 S (BEST ASSOCIATION CONSTANT)
L21            1 DUPLICATE REMOVE L20 (1 DUPLICATE REMOVED)
L22            3 S L14 AND MONOCLONAL?
L23            3 DUPLICATE REMOVE L22 (0 DUPLICATES REMOVED)
L24            8 S L14 AND ASSAY?
L25            8 DUPLICATE REMOVE L24 (0 DUPLICATES REMOVED)

=>
```

```
d his

     (FILE 'HOME' ENTERED AT 19:02:11 ON 09 AUG 2006)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 19:02:32 ON 09
     AUG 2006
L1            50 S (ANTIBOD? ASSOCIATION CONSTANT)
L2             0 S L1 AND REVIEW?
L3            30 DUPLICATE REMOVE L1 (20 DUPLICATES REMOVED)
L4            25 S L3 AND PD<1998
L5             0 S L4 NOT L3
L6             5 S L3 NOT L4
L7          1313 S OXLDL AND ANTIBOD?
L8           170 S L7 AND MALONDIALDEHYDE?
L9          5480 S (ANTIBOD? CROSS REACT?)
L10            1 S L7 AND L9
L11           26 S L9 AND LDL?
L12            8 DUPLICATE REMOVE L11 (18 DUPLICATES REMOVED)

=>
```

d his

(FILE 'HOME' ENTERED AT 19:02:11 ON 09 AUG 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 19:02:32 ON 09 AUG 2006

| | | | |
|---|---|---|---|
| L1 | 50 | S | (ANTIBOD? ASSOCIATION CONSTANT) |
| L2 | 0 | S | L1 AND REVIEW? |
| L3 | 30 | | DUPLICATE REMOVE L1 (20 DUPLICATES REMOVED) |
| L4 | 25 | S | L3 AND PD<1998 |
| L5 | 0 | S | L4 NOT L3 |
| L6 | 5 | S | L3 NOT L4 |
| L7 | 1313 | S | OXLDL AND ANTIBOD? |
| L8 | 170 | S | L7 AND MALONDIALDEHYDE? |
| L9 | 5480 | S | (ANTIBOD? CROSS REACT?) |
| L10 | 1 | S | L7 AND L9 |
| L11 | 26 | S | L9 AND LDL? |
| L12 | 8 | | DUPLICATE REMOVE L11 (18 DUPLICATES REMOVED) |

=>

ANSWER 13 OF 16 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

AN 89215548 EMBASE
DN 1989215548
TI Biospecific interactions: Their quantitative characterization and use for solute purification.
AU Winzor D.J.; De Jersey J.
CS Department of Biochemistry, University of Queensland, St. Lucia, QLD 4067, Australia
SO Journal of Chromatography - Biomedical Applications, (1989) Vol. 492, pp. 377-430. .
ISSN: 0378-4347 CODEN: JCBADL
CY Netherlands
DT Journal
FS 029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 12 Dec 1991
Last Updated on STN: 12 Dec 1991
AB Biospecificity is due largely to the formation and dissociation of non-covalent complexes between small molecules and macromolecules, or between two macromolecules. The first part of this review is concerned with the use of such biospecificity in the fractionation and identification of solutes. Major emphasis is given to affinity chromatography, especially in regard to the practical considerations inherent in an experimental situation and to the wide range of specific interactions that can be utilized. The second part of the review considers the quantitative characterization of biospecific complex formation. The merits of frontal gel chromatography, electrophoretic methods and affinity chromatography are discussed, and special consideration is given to the effects of ligand and/or acceptor multivalency because of its relevance to many biospecific interactions. Finally attention is drawn to the feasibility of employing quantitative affinity chromatographic theory for the determination of association constants for antigen-antibody systems by radioimmunoassay and enzyme-linked immunosorbent assay techniques.
CT Medical Descriptors:
*affinity chromatography
*antigen antibody reaction
*complex formation
*enzyme linked immunosorbent assay
*molecular interaction
*radioimmunoassay
review
methodology
priority journal

ANSWER 13 OF 16 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

AN 89215548 EMBASE
DN 1989215548
TI Biospecific interactions: Their quantitative characterization and use for solute purification.
AU Winzor D.J.; De Jersey J.
CS Department of Biochemistry, University of Queensland, St. Lucia, QLD 4067, Australia
SO Journal of Chromatography - Biomedical Applications, (1989) Vol. 492, pp. 377-430. .
ISSN: 0378-4347 CODEN: JCBADL
CY Netherlands
DT Journal
FS 029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 12 Dec 1991
Last Updated on STN: 12 Dec 1991
AB Biospecificity is due largely to the formation and dissociation of non-covalent complexes between small molecules and macromolecules, or between two macromolecules. The first part of this review is concerned with the use of such biospecificity in the fractionation and identification of solutes. Major emphasis is given to affinity chromatography, especially in regard to the practical considerations inherent in an experimental situation and to the wide range of specific interactions that can be utilized. The second part of the review considers the quantitative characterization of biospecific complex formation. The merits of frontal gel chromatography, electrophoretic methods and affinity chromatography are discussed, and special consideration is given to the effects of ligand and/or acceptor multivalency because of its relevance to many biospecific interactions. Finally attention is drawn to the feasibility of employing quantitative affinity chromatographic theory for the determination of association constants for antigen-antibody systems by radioimmunoassay and enzyme-linked immunosorbent assay techniques.
CT Medical Descriptors:
*affinity chromatography
*antigen antibody reaction
*complex formation
*enzyme linked immunosorbent assay
*molecular interaction
*radioimmunoassay
review
methodology
priority journal

ANSWER 7 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1976:87772 CAPLUS

DN 84:87772

ED Entered STN: 12 May 1984

TI Antigen-binding properties of antibody molecules: time-course dynamics and biological significance

AU Macario, Alberto J. L.; Conway de Macario, Everly

CS Div. Biol. Med. Sci., Brown Univ., Providence, RI, USA

SO Current Topics in Microbiology and Immunology (1975), 71, 125-70
CODEN: CTMIA3; ISSN: 0070-217X

DT Journal; General Review

LA English

CC 15-0 (Immunochemistry)

AB A review with .apprx.210 refs., on antibody-antigen reactions, kinetics (e. g., assocn. const., heterogeneity index), and related cell interactions, maturation, and pathol.

ST review antibody antigen kinetics

IT Antibodies
RL: BIOL (Biological study)
(antigen reactions, kinetics of)

IT Kinetics, reaction
(of antibody-antigen complexes)

ANSWER 7 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1976:87772 CAPLUS

DN 84:87772

ED Entered STN: 12 May 1984

TI Antigen-binding properties of antibody molecules: time-course dynamics and biological significance

AU Macario, Alberto J. L.; Conway de Macario, Everly

CS Div. Biol. Med. Sci., Brown Univ., Providence, RI, USA

SO Current Topics in Microbiology and Immunology (1975), 71, 125-70
CODEN: CTMIA3; ISSN: 0070-217X

DT Journal; General Review

LA English

CC 15-0 (Immunochemistry)

AB A review with .apprx.210 refs., on antibody-antigen reactions, kinetics (e. g., assocn. const., heterogeneity index), and related cell interactions, maturation, and pathol.

ST review antibody antigen kinetics

IT Antibodies
RL: BIOL (Biological study)
(antigen reactions, kinetics of)

IT Kinetics, reaction
(of antibody-antigen complexes)

ANSWER 6 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1978:119182 CAPLUS
DN 88:119182
ED Entered STN: 12 May 1984
TI The antibody combining region: speculations on the hypothesis of general multispecificity
AU Inman, John K.
CS Natl. Inst. Allergy Infect. Dis., NIH, Bethesda, MD, USA
SO Immunology Series (1978), 8(Theor. Immunol.), 243-78
CODEN: IMSED7; ISSN: 0092-6019
DT Journal; General Review
LA English
CC 15-0 (Immunochemistry)
AB A review with many refs., on antibody active sites, hapten binding, and models for assocn. consts. and serol. crossreactions.
ST review antibody site model
IT Antibodies
RL: BIOL (Biological study)
(active site)

ANSWER 6 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1978:119182 CAPLUS
DN 88:119182
ED Entered STN: 12 May 1984
TI The antibody combining region: speculations on the hypothesis of general multispecificity
AU Inman, John K.
CS Natl. Inst. Allergy Infect. Dis., NIH, Bethesda, MD, USA
SO Immunology Series (1978), 8(Theor. Immunol.), 243-78
CODEN: IMSED7; ISSN: 0092-6019
DT Journal; General Review
LA English
CC 15-0 (Immunochemistry)
AB A review with many refs., on antibody active sites, hapten binding, and models for assocn. consts. and serol. crossreactions.
ST review antibody site model
IT Antibodies
RL: BIOL (Biological study)
(active site)

ANSWER 7 OF 8 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

AN 89215548 EMBASE
DN 1989215548
TI Biospecific interactions: Their quantitative characterization and use for solute purification.
AU Winzor D.J.; De Jersey J.
CS Department of Biochemistry, University of Queensland, St. Lucia, QLD 4067, Australia
SO Journal of Chromatography - Biomedical Applications, (1989) Vol. 492, pp. 377-430. .
ISSN: 0378-4347 CODEN: JCBADL
CY Netherlands
DT Journal
FS 029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 12 Dec 1991
Last Updated on STN: 12 Dec 1991
AB Biospecificity is due largely to the formation and dissociation of non-covalent complexes between small molecules and macromolecules, or between two macromolecules. The first part of this review is concerned with the use of such biospecificity in the fractionation and identification of solutes. Major emphasis is given to affinity chromatography, especially in regard to the practical considerations inherent in an experimental situation and to the wide range of specific interactions that can be utilized. The second part of the review considers the quantitative characterization of biospecific complex formation. The merits of frontal gel chromatography, electrophoretic methods and affinity chromatography are discussed, and special consideration is given to the effects of ligand and/or acceptor multivalency because of its relevance to many biospecific interactions. Finally attention is drawn to the feasibility of employing quantitative affinity chromatographic theory for the determination of association constants for antigen-antibody systems by radioimmunoassay and enzyme-linked immunosorbent assay techniques.
CT Medical Descriptors:
*affinity chromatography
*antigen antibody reaction
*complex formation
*enzyme linked immunosorbent assay
*molecular interaction

```
d his

     (FILE 'HOME' ENTERED AT 19:02:11 ON 09 AUG 2006)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 19:02:32 ON 09
     AUG 2006
L1            50 S (ANTIBOD? ASSOCIATION CONSTANT)
L2             0 S L1 AND REVIEW?
L3            30 DUPLICATE REMOVE L1 (20 DUPLICATES REMOVED)
L4            25 S L3 AND PD<1998
L5             0 S L4 NOT L3
L6             5 S L3 NOT L4
L7          1313 S OXLDL AND ANTIBOD?
L8           170 S L7 AND MALONDIALDEHYDE?
L9          5480 S (ANTIBOD? CROSS REACT?)
L10            1 S L7 AND L9
L11           26 S L9 AND LDL?
L12            8 DUPLICATE REMOVE L11 (18 DUPLICATES REMOVED)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 19:25:52 ON 09
     AUG 2006
L13          222 S (ASSOCIATION CONSTANT) AND REVIEW?
L14          178 DUPLICATE REMOVE L13 (44 DUPLICATES REMOVED)
L15           16 S L14 AND ANTIBOD?
L16       548879 S (MONOCLONAL ANTIBOD?)
L17          792 S L16 AND (ASSOCIATION CONSTANT?)
L18            2 S L17 AND REVIEW?
L19            1 S (OPTIM? ASSOCIATION CONSTANT)
L20            2 S (BEST ASSOCIATION CONSTANT)
L21            1 DUPLICATE REMOVE L20 (1 DUPLICATE REMOVED)
L22            3 S L14 AND MONOCLONAL?
L23            3 DUPLICATE REMOVE L22 (0 DUPLICATES REMOVED)
L24            8 S L14 AND ASSAY?
L25            8 DUPLICATE REMOVE L24 (0 DUPLICATES REMOVED)

=>
```

ANSWER 3 OF 25 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1990:198024 BIOSIS
DN PREV199089104695; BA89:104695
TI MEASUREMENT OF ASSOCIATION CONSTANTS IN ELISA REACTIONS BETWEEN SOLID-PHASE BIOTINYLATED ANTIGEN.
AU MURRAY J S [Reprint author]; BROWN J C
CS DEP MICROBIOL, UNIV KANSAS, LAWRENCE, KANSAS 66405, USA
SO Journal of Immunological Methods, (1990) Vol. 127, No. 1, pp. 25-28.
CODEN: JIMMBG. ISSN: 0022-1759.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 24 Apr 1990
Last Updated on STN: 24 Apr 1990
AB An ELISA procedure which utilized an avidin-peroxidase amplification reaction to detect and quantify the amount of fluid-phase biotinylated and antigen bound to solid-phase antibody was developed to determine antibody association constants. The methodology required is uncomplicated, avoids the use of radioisotopes, and is theoretically amenable for use with any protein which can be biotinylated, and any receptor protein which can be immobolized on plastic wells. A plot of known immobilized biotinylated antigen concentrations, which ranged from approximately 100 ng/ml to 1000 ng/ml, versus avidin-peroxidase conjugate product formation, was used to establish a standard curve from which the amount of antibody-associated antigen in binding assays could be determined. Antibody association constants obtained with this method ranged from 105 to 109 M-1.
CC Cytology - Animal 02506
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Enzymes - Methods 10804
Immunology - General and methods 34502
IT Major Concepts
Cell Biology; Enzymology (Biochemistry and Molecular Biophysics); Immune System (Chemical Coordination and Homeostasis)
IT Miscellaneous Descriptors
MONOCLONAL ANTIBODIES

ANSWER 3 OF 25 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1990:198024 BIOSIS
DN PREV199089104695; BA89:104695
TI MEASUREMENT OF ASSOCIATION CONSTANTS IN ELISA REACTIONS BETWEEN SOLID-PHASE BIOTINYLATED ANTIGEN.
AU MURRAY J S [Reprint author]; BROWN J C
CS DEP MICROBIOL, UNIV KANSAS, LAWRENCE, KANSAS 66405, USA
SO Journal of Immunological Methods, (1990) Vol. 127, No. 1, pp. 25-28.
CODEN: JIMMBG. ISSN: 0022-1759.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 24 Apr 1990
Last Updated on STN: 24 Apr 1990
AB An ELISA procedure which utilized an avidin-peroxidase amplification reaction to detect and quantify the amount of fluid-phase biotinylated and antigen bound to solid-phase antibody was developed to determine antibody association constants. The methodology required is uncomplicated, avoids the use of radioisotopes, and is theoretically amenable for use with any protein which can be biotinylated, and any receptor protein which can be immobolized on plastic wells. A plot of known immobilized biotinylated antigen concentrations, which ranged from approximately 100 ng/ml to 1000 ng/ml, versus avidin-peroxidase conjugate product formation, was used to establish a standard curve from which the amount of antibody-associated antigen in binding assays could be determined. Antibody association constants obtained with this method ranged from 105 to 109 M-1.
CC Cytology - Animal 02506
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Enzymes - Methods 10804
Immunology - General and methods 34502
IT Major Concepts
Cell Biology; Enzymology (Biochemistry and Molecular Biophysics); Immune System (Chemical Coordination and Homeostasis)
IT Miscellaneous Descriptors
MONOCLONAL ANTIBODIES

Journal of Chromatography B: Biomedical Sciences and Applications
Volume 492 , 8 August 1989, Pages 377-430

doi:10.1016/S0378-4347(00)84476-X Cite or Link Using DOI




Review

# Biospecific interactions: Their quantitative characterization and use for solute purification

**Donald J. Winzor and John De Jersey**

Department of Biochemistry, University of Queensland, St. Lucia, Queensland 4067 Australia

Received 23 December 1988; revised 2 March 1989. Available online 21 January 2002.

## Abstract

Biospecificity is due largely to the formation and dissociation of non-covalent complexes between small molecules and macromolecules, or between two macromolecules. The first part of this review is concerned with the use of such biospecificity in the fractionation and identification of solutes. Major emphasis is given to affinity chromatography, especially in regard to the practical considerations inherent in an experimental situation and to the wide range of specific interactions that can be utilized. The second part of the review considers the quantitative characterization of biospecific complex formation. The merits of frontal gel chromatography, electrophoretic methods and affinity chromatography are discussed, and special consideration is given to the effects of ligand and/or acceptor multivalency because of its relevance to many biospecific interactions. Finally attention is drawn to the feasibility of employing quantitative affinity chromatographic theory for the determination of association constants for antigen-antibody systems by radioimmunoassay and enzyme-linked immunosorbent assay techniques.

**Author Keywords:** A *f*-Valent solute (acceptor of ligand) *K* Equilibrium constant for solute self-association (molar scale) *K'* Equilibrium constant for solute self-association (weight scale) *L* Equilibrium constant for the association of monomer with immobilized monomer M Monomer undergoing self-association to polymer P $M_i$ Molecular weight of species *i* P

Polymeric form of self-associating monomer $R_f$ Electrophoretic mobility of a species relative to that of bromophenol blue $|ov|barR_f$ Relative constituent mobility of a species S Univalent ligand $V_i$ Elution volume of species $i$ $V_i^*$ Elution volume of $i$ in the absence of interaction with $|ov|barV_i$ Constituent elution volume of species $i$ X $q$-Valent acceptor (receptor) $c_i$ Weight concentration of uncomplexed species $i$ $|ov|barc_i$ Total weight concentration of species $i$ $f$ Valence of acceptor; or of partitioning solute (affinity chromatography) $[i]$ Molar concentration of uncomplexed species $i$ $[|ov|bari]$ Total molar concentration of species $i$ $[|ov|bari]$ Total molar concentration of species $i$ in partition studies $k_{ij}$ Intrinsic association constant for the interaction between species $i$ and $j$ $k_T$ Intrinsic association constant for ternary complex formation $n$ Stoichiometry of solute self-association $q$ Valence of matrix sites $r$ Klotz (Scatchard) binding function $r_f$ Counterpart of $r$ for an $f$-valent ligand $v_i$ Electrophoretic mobility of species $i$ $|ov|barv_i$ Constituent electrophoretic mobility of species $i$ con A Concanavalin A ELISA Enzyme-linked immunosorbent assay EnOH Serine-dependent enzyme FPLC Fast protein liquid chromatography HPLAC High-performance liquid affinity chromatography HPLC High-performance liquid chromatography IEF Isoelectric focusing IgG Immunoglobulin G RIA Radioimmunoassay

**Journal of Chromatography B: Biomedical Sciences and Applications**
Volume 492 , 8 August 1989, Pages 377-430

**This Document**
▸ **Abstract**
**Actions**
· Cited By
· Save as Citation Alert
· E-mail Article
· Export Citation

results list | previous 15 of 22 | next

Home | Search | Journals | Books | Abstract Databases | My Profile | Alerts | Help

Contact Us | Terms & Conditions | Privacy Policy

10/802,643
Search
L/Cook 8/9/06

d his

(FILE 'HOME' ENTERED AT 15:59:55 ON 09 AUG 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 16:00:18 ON 09 AUG 2006

```
L1          8899 S LDL AND ANTIBOD?
L2           160 S L1 AND (BINDING AFFINITY)
L3             1 S L2 AND REVIEW?
L4             9 S L1 AND (BIND? CONSTANT)
L5             3 DUPLICATE REMOVE L4 (6 DUPLICATES REMOVED)
L6           160 S L2 NOT L4
L7          5275 S P6 AND PD<1998
L8            21 S L6 AND OXIDI?
L9            12 DUPLICATE REMOVE L8 (9 DUPLICATES REMOVED)

=>
```

d his

(FILE 'HOME' ENTERED AT 15:59:55 ON 09 AUG 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 16:00:18 ON 09 AUG 2006

```
L1          8899 S LDL AND ANTIBOD?
L2           160 S L1 AND (BINDING AFFINITY)
L3             1 S L2 AND REVIEW?
L4             9 S L1 AND (BIND? CONSTANT)
L5             3 DUPLICATE REMOVE L4 (6 DUPLICATES REMOVED)
L6           160 S L2 NOT L4
L7          5275 S P6 AND PD<1998
L8            21 S L6 AND OXIDI?
L9            12 DUPLICATE REMOVE L8 (9 DUPLICATES REMOVED)
```

=>

10/802,643
updated Search
LYcook 8/9/06

d his

(FILE 'HOME' ENTERED AT 09:41:01 ON 09 AUG 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 09:41:36 ON 09 AUG 2006

L1 2 S (HUMAN MALONDIALDEHYDE MODIFIED LOW DENSITY LIPOPROTEIN)
L2 2 DUPLICATE REMOVE L1 (0 DUPLICATES REMOVED)
L3 189 S (MALONDIALDEHYDE MODIFIED LOW DENSITY LIPOPROTEIN)
L4 11299 S (OXID? LOW DENSITY LIPOPROTEIN)
L5 56 S L4 AND L3
L6 35 DUPLICATE REMOVE L5 (21 DUPLICATES REMOVED)
L7 14 S L6 AND ANTIBOD?

=>

d his

(FILE 'HOME' ENTERED AT 09:41:01 ON 09 AUG 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 09:41:36 ON 09 AUG 2006

| | | |
|---|---|---|
| L1 | 2 | S (HUMAN MALONDIALDEHYDE MODIFIED LOW DENSITY LIPOPROTEIN) |
| L2 | 2 | DUPLICATE REMOVE L1 (0 DUPLICATES REMOVED) |
| L3 | 189 | S (MALONDIALDEHYDE MODIFIED LOW DENSITY LIPOPROTEIN) |
| L4 | 11299 | S (OXID? LOW DENSITY LIPOPROTEIN) |
| L5 | 56 | S L4 AND L3 |
| L6 | 35 | DUPLICATE REMOVE L5 (21 DUPLICATES REMOVED) |
| L7 | 14 | S L6 AND ANTIBOD? |

=>

ANSWER 14 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

AN 97281078 EMBASE
DN 1997281078
TI Autoantibodies to oxidized low density lipoprotein: The relationship to low density lipoprotein fatty acid composition in diabetes.
AU Griffin M.E.; McInerney D.; Fraser A.; Johnson A.H.; Collins P.B.; Owens D.; Tomkin G.H.
CS Prof. G.H. Tomkin, 1, Fitzwilliam Square, Dublin 2, Ireland
SO Diabetic Medicine, (1997) Vol. 14, No. 9, pp. 741-747. .
Refs: 34
ISSN: 0742-3071 CODEN: DIMEEV
CY United Kingdom
DT Journal; Article
FS 006 Internal Medicine
018 Cardiovascular Diseases and Cardiovascular Surgery
029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 2 Oct 1997
Last Updated on STN: 2 Oct 1997
AB Autoantibodies to oxidized low density lipoprotein have been shown to be an independent predictor of the progression of carotid atherosclerosis. This study examines the relationship between low density lipoprotein fatty acid composition and autoantibodies to both malondialdehyde-modified and copper-oxidized low density lipoprotein in non-diabetic patients with (n = 17), and without (n = 18), definite evidence of previous myocardial infarction. The third group were non-insulin-dependent diabetic patients with no evidence of atherosclerosis (n = 15) and the fourth group were patients with non-insulin-dependent diabetes (n = 17) who had definite evidence of previous myocardial infarction. Fatty acids were measured by gas-liquid chromatography. Antibodies to malondialdehyde-modified low density lipoprotein and copper-oxidized low density lipoprotein were determined by an ELISA method. Autoantibodies to copper-oxidized low density lipoprotein were significantly higher in the non-diabetic patients with heart disease when compared to any other group ($p < 0.05$). Autoantibodies to malondialdehyde-modified low density lipoprotein were significantly higher in the non-diabetic subjects with heart disease and in both diabetic groups compared to non-diabetic subjects without coronary heart disease ($p < 0.05$). Linoleic acid (%) in low density lipoprotein did not differ between groups but arachidonic acid (%) was significantly lower in both diabetic and non- diabetic patients with coronary heart disease ($p < 0.05$). The diabetic patients with low antibodies had 39.6 ± 2.2% polyunsaturated fatty acids in their low density lipoprotein while diabetic patients with high antibodies had 46.7 ± 1.2% polyunsaturates in their low density lipoprotein ($p < 0.01$). This study confirms the association between antibodies to oxidized low density lipoprotein and coronary heart disease and shows raised low density lipoprotein antibody levels in diabetic patients with and without demonstrable atherosclerosis. In the diabetic patients, those with high antibody levels had high polyunsaturated fatty acid levels in their LDL suggesting a possible role for dietary intervention.
CT Medical Descriptors:
*heart infarction
*lipid composition
*non insulin dependent diabetes mellitus
adult

aged
article
atherosclerosis
controlled study
female
human
ischemic heart disease
lipid oxidation
major clinical study
male
Drug Descriptors:
*autoantibody: EC, endogenous compound
*copper
*fatty acid: EC, endogenous compound
*malonaldehyde
*oxidized low density lipoprotein: EC, endogenous compound
arachidonic acid: EC, endogenous compound
linoleic acid: EC, endogenous compound
polyunsaturated fatty acid: EC, endogenous compound
RN (copper) 15158-11-9, 7440-50-8; (malonaldehyde) 542-78-9; (arachidonic acid) 506-32-1, 6610-25-9, 7771-44-0; (linoleic acid) 1509-85-9, 2197-37-7, 60-33-3, 822-17-3

=>

ANSWER 9 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1995:30184 BIOSIS
DN PREV199598044484
TI Distribution of immunoreactive malondialdehyde-modified low-density lipoprotein in human serum.
AU Kotani, Kazuo [Reprint author]; Maekawa, Masato; Kanno, Takashi; Kondo, Akira; Toda, Naoko; Manabe, Mitsuhisa
CS Dep. Lab. Med., Hamamatsu Univ. Sch. Med., Hamamatsu, Handa-cho 3600, Shizuoka 431-31, Japan
SO Biochimica et Biophysica Acta, (1994) Vol. 1215, No. 1-2, pp. 121-125. CODEN: BBACAQ. ISSN: 0006-3002.
DT Article
LA English
ED Entered STN: 25 Jan 1995
Last Updated on STN: 25 Jan 1995
AB We developed a sensitive enzyme-linked immunosorbent assay (ELISA) for detection of malondialdehyde-modified low-density lipoprotein (MDA-LDL) in human serum. A monoclonal antibody against MDA-LDL (ML25) used in our method recognized not only MDA-LDL but also other MDA-modified proteins. However, MDA-LDL was able to be detected specifically by using a combination of ML25 and an antibody specific for apolipoprotein B (apo B) (AB16), which was conjugated with beta-galactosidase. Using this method, measurable amounts of MDA-LDL were detected in the sera of 40 healthy individuals. MDA-LDL was observed to be mainly distributed in the human LDL fraction separated by density gradient ultracentrifugation, while in each lipoprotein subtraction the largest amount of MDA-LDL per protein was found at a subfraction between LDL and HDL. The particle size of LDL in this fraction was smaller than that of LDL in the main LDL fraction, as assessed by electrophoresis. In addition, LDL oxidized by Cu-2+ was also detectable with this method. We conclude that our method is sensitive and specific for MDA-LDL and might be useful for investigating MDA-LDL in the human circulation.
CC Clinical biochemistry - General methods and applications 10006
Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biochemistry studies - Carbohydrates 10068
Biochemistry studies - Minerals 10069
Biophysics - Molecular properties and macromolecules 10506
Enzymes - Methods 10804
Metabolism - Lipids 13006
Metabolism - Proteins, peptides and amino acids 13012
Blood - Blood and lymph studies 15002
Immunology - General and methods 34502
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Clinical Chemistry (Allied Medical Sciences); Enzymology (Biochemistry and Molecular Biophysics); Immune System (Chemical Coordination and Homeostasis); Metabolism
IT Miscellaneous Descriptors
ANALYTICAL METHOD; COPPER OXIDIZED LOW DENSITY LIPOPROTEIN; ELISA; IMMUNOLOGIC METHOD; MONOCLONAL ANTIBODY AB16; MONOCLONAL ANTIBODY ML25; PARTICLE SIZE
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Hominidae
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

10/802,643
LYCook 8/9/06
updated search.

d his

(FILE 'HOME' ENTERED AT 12:58:10 ON 09 AUG 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 12:58:27 ON 09 AUG 2006

L1 22 S ML25 AND ANTIBOD?
L2 7 DUPLICATE REMOVE L1 (15 DUPLICATES REMOVED)
L3 0 S L2 AND CONSTANT?

=>

d his

(FILE 'HOME' ENTERED AT 12:58:10 ON 09 AUG 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 12:58:27 ON 09 AUG 2006

L1 22 S ML25 AND ANTIBOD?
L2 7 DUPLICATE REMOVE L1 (15 DUPLICATES REMOVED)
L3 0 S L2 AND CONSTANT?

=>

ANSWER 1 OF 7 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 1
AN 2002:413901 BIOSIS
DN PREV200200413901
TI Single LDL apheresis improves serum remnant-like particle-cholesterol, C-reactive protein, and malondialdehyde-modified-low-density lipoprotein concentrations in Japanese hypercholesterolemic subjects.
AU Kobayashi, Junji [Reprint author]; Katsube, Susumu; Shimoda, Mayumi; Furuhashi, Kenji; Kitano, Shouichi; Masuda, Mizue; Maruyama, Tokiko; Shinomiya, Masaki
CS Department of Internal Medicine, Chibaken Saiseikai Narashino Hospital, 1-1-1 Izumi Chou, Narashino, Chiba, 275-0006, Japan
maryland95@angel.ne.jp
SO Clinica Chimica Acta, (July, 2002) Vol. 321, No. 1-2, pp. 107-112. print.
CODEN: CCATAR. ISSN: 0009-8981.
DT Article
LA English
ED Entered STN: 31 Jul 2002
Last Updated on STN: 31 Jul 2002
AB Background: Single low-density lipoprotein (LDL)-apheresis may affect serum remnant-like particle-cholesterol (RLP-C), C-reactive protein (CRP) and malondialdehyde-modified (MDA)-LDL concentrations. Subjects and methods: Six subjects with hypercholesterolemia (five men, one woman) were involved in this study. Mean age and body mass index of the study subjects were 58+-3.1 years and 23.6+-2.07 kg/m2, respectively. Five of the subjects were diagnosed as heterozygous familial hypercholesterolemia (FH) because of having both marked hypercholesterolemia and Achilles tendon xanthomas. LDL apheresis was introduced and continued using a dextran sulfate cellulose adsorption column technique every 2 weeks. Serum RLP-C was measured using an immunoaffinity mixed gel containing anti-apolipoprotein A-I and anti-apolipoprotein B monoclonal antibody. Serum CRP was measured by latex-enhanced assay. Serum MDA-LDL was measured using monoclonal antibody against MDA-LDL ( ML25). Results: Combined treatment in the steady state pre-treatment yielded a total, LDL- and HDL-cholesterol, and TG concentrations of 5.39+-0.81, 3.82+-1.03, 1.24+-0.29 and 0.92+-0.43 mmol/l, respectively, and a post-treatment total, LDL- and HDL-cholesterol and TG concentrations of 2.79+-0.37 (-48%, p<0.001), 1.63+-0.29 (-57%, p<0.001), 1.18+-0.26 (-5%, NS) and 0.23+-0.11 mmol/l (-75%, p<0.001), respectively. Serum RLP-C and CRP concentrations showed a substantial reduction (-73%, p<0.05 for RLP-C; -56%, p<0.05 for CRP) during this procedure. In addition, LDL apheresis was found to also cause a marked reduction in serum MDA-LDL concentration (-61%, p<0.05). Conclusion: LDL-apheresis is an effective treatment for removing atherogenic factors RLP-C, CRP and MDA-LDL from sera.
CC Genetics - Human 03508
Clinical biochemistry - General methods and applications 10006
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biochemistry studies - Sterols and steroids 10067
Pathology - General 12502
Pathology - Therapy 12512
Metabolism - General metabolism and metabolic pathways 13002
Metabolism - Metabolic disorders 13020
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
IT Major Concepts
Clinical Chemistry (Allied Medical Sciences); Human Medicine (Medical Sciences); Metabolism; Methods and Techniques
IT Parts, Structures, & Systems of Organisms
serum: blood and lymphatics
IT Diseases
familial hypercholesterolemia: genetic disease, metabolic disease
Hypercholesterolemia, Familial (MeSH)

pulled LYcook 8/9/06.

IT Chemicals & Biochemicals
C-reactive protein; HDL-cholesterol [high-density lipoprotein-cholesterol]; TG [triglyceride]; low-density lipoprotein-cholesterol; malondialdehyde-modified-low-density lipoprotein; remnant-like particle-cholesterol; single low-density lipoprotein-apheresis: therapeutic method; total cholesterol

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human: Japanese, patient
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

IT Chemicals & Biochemicals
C-reactive protein; HDL-cholesterol [high-density lipoprotein-cholesterol]; TG [triglyceride]; low-density lipoprotein-cholesterol; malondialdehyde-modified-low-density lipoprotein; remnant-like particle-cholesterol; single low-density lipoprotein-apheresis: therapeutic method; total cholesterol

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human: Japanese, patient
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ANSWER 3 OF 7 MEDLINE on STN
AN 97174657 MEDLINE
DN PubMed ID: 9022342
TI Determination of malondialdehyde-modified LDL(MDA-LDL) and its potential usefulness.
AU Kotani K; Kondo A; Manabe M; Maekawa M; Kanno T
CS Department of Laboratory Medicine, Hamamatsu University School of Medicine.
SO Rinsho byori. The Japanese journal of clinical pathology, (1997 Jan) Vol. 45, No. 1, pp. 47-54.
Journal code: 2984781R. ISSN: 0047-1860.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA Japanese
FS Priority Journals
EM 199702
ED Entered STN: 6 Mar 1997
Last Updated on STN: 6 Mar 1997
Entered Medline: 26 Feb 1997
AB Numerous studies have indicated that oxidative modification of low-density lipoprotein(LDL) plays a critical role in the pathogenesis of atherosclerosis. Malondialdehyde-modified LDL(MDA-LDL) is one of the candidates which is the oxidative product of LDL. However, the existence of MDA-LDL in the circulation has been in dispute. Therefore, for the assessment of oxidized-LDL in human serum, we developed a sensitive enzyme-linked-immunosorbent assay(ELISA) for the detection of MDA-LDL. In our method, monoclonal antibody against MDA-LDL, ML25 was used. ML25 recognized MDA-LDL as well as MDA-modified proteins by a solid-phase competitive enzyme immunoassay. Therefore, to establish an ELISA method which is specific for detection of MDA-LDL, ML25 was combined with apoB-specific antibody (AB16) as the second antibody. Using this method, MDA-LDL was detectable in the sera of 314 healthy individuals. The concentration of MDA-LDL preferably ranged from 20 to 80 units/l when the absorbance with artificially prepared MDA-LDL at the concentration of 1 mg/l was defined as 1 unit/l. Furthermore, assays for lipoprotein subfractions separated by density-gradient ultracentrifugation revealed that MDA-LDL was mainly distributed in the LDL fraction as expected, and MDA-LDL/apoB ratio showed a peak at small, dense LDL fractions. This finding seems to be quite interesting since an elevated level of small, dense LDL has been reported to be associated with an increased risk of atherosclerosis. We concluded that our method is useful for specific detection of MDA-LDL in human serum and might be an elevation method for atherogenicity.
CT Arteriosclerosis: BL, blood
Arteriosclerosis: ET, etiology
English Abstract
Enzyme-Linked Immunosorbent Assay
Humans
Lipoproteins, LDL: BL, blood
*Lipoproteins, LDL: ME, metabolism
*Malondialdehyde: ME, metabolism
Oxidation-Reduction
Risk
RN 542-78-9 (Malondialdehyde)
CN 0 (Lipoproteins, LDL)

L2 ANSWER 4 OF 7 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 2
AN 1994:452208 BIOSIS
DN PREV199497465208
TI Inhibitory effect of recombinant fibronectin polypeptides on the adhesion of liver-metastatic lymphoma cells to hepatic sinusoidal endothelial cells and tumor invasion.
AU Yoneda, Junya; Saiki, Ikuo [Reprint author]; Kobayashi, Hideo; Fujii,

ANSWER 3 OF 7 MEDLINE on STN
AN 97174657 MEDLINE
DN PubMed ID: 9022342
TI Determination of malondialdehyde-modified LDL(MDA-LDL) and its potential usefulness.
AU Kotani K; Kondo A; Manabe M; Maekawa M; Kanno T
CS Department of Laboratory Medicine, Hamamatsu University School of Medicine.
SO Rinsho byori. The Japanese journal of clinical pathology, (1997 Jan) Vol. 45, No. 1, pp. 47-54.
Journal code: 2984781R. ISSN: 0047-1860.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA Japanese
FS Priority Journals
EM 199702
ED Entered STN: 6 Mar 1997
Last Updated on STN: 6 Mar 1997
Entered Medline: 26 Feb 1997
AB Numerous studies have indicated that oxidative modification of low-density lipoprotein(LDL) plays a critical role in the pathogenesis of atherosclerosis. Malondialdehyde-modified LDL(MDA-LDL) is one of the candidates which is the oxidative product of LDL. However, the existence of MDA-LDL in the circulation has been in dispute. Therefore, for the assessment of oxidized-LDL in human serum, we developed a sensitive enzyme-linked-immunosorbent assay(ELISA) for the detection of MDA-LDL. In our method, monoclonal antibody against MDA-LDL, ML25 was used. ML25 recognized MDA-LDL as well as MDA-modified proteins by a solid-phase competitive enzyme immunoassay. Therefore, to establish an ELISA method which is specific for detection of MDA-LDL, ML25 was combined with apoB-specific antibody (AB16) as the second antibody. Using this method, MDA-LDL was detectable in the sera of 314 healthy individuals. The concentration of MDA-LDL preferably ranged from 20 to 80 units/l when the absorbance with artificially prepared MDA-LDL at the concentration of 1 mg/l was defined as 1 unit/l. Furthermore, assays for lipoprotein subfractions separated by density-gradient ultracentrifugation revealed that MDA-LDL was mainly distributed in the LDL fraction as expected, and MDA-LDL/apoB ratio showed a peak at small, dense LDL fractions. This finding seems to be quite interesting since an elevated level of small, dense LDL has been reported to be associated with an increased risk of atherosclerosis. We concluded that our method is useful for specific detection of MDA-LDL in human serum and might be an elevation method for atherogenicity.
CT Arteriosclerosis: BL, blood
Arteriosclerosis: ET, etiology
English Abstract
Enzyme-Linked Immunosorbent Assay
Humans
Lipoproteins, LDL: BL, blood
*Lipoproteins, LDL: ME, metabolism
*Malondialdehyde: ME, metabolism
Oxidation-Reduction
Risk
RN 542-78-9 (Malondialdehyde)
CN 0 (Lipoproteins, LDL)

L2 ANSWER 4 OF 7 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 2
AN 1994:452208 BIOSIS
DN PREV199497465208
TI Inhibitory effect of recombinant fibronectin polypeptides on the adhesion of liver-metastatic lymphoma cells to hepatic sinusoidal endothelial cells and tumor invasion.
AU Yoneda, Junya; Saiki, Ikuo [Reprint author]; Kobayashi, Hideo; Fujii,

Hideki; Ishizaki, Yukuo; Kato, Ikunoshin; Kiso, Makoto; Hasegawa, Akira; Azuma, Ichiro
CS Dep. Patho-Biochem., Res. Inst. Wakan-yaku, Toyama Med. Pharmaceutical Univ., 2630 Sugitani, Toyama 930-01, Japan
SO Japanese Journal of Cancer Research, (1994) Vol. 85, No. 7, pp. 723-734. CODEN: JJCREP. ISSN: 0910-5050.
DT Article
LA English
ED Entered STN: 24 Oct 1994
Last Updated on STN: 24 Oct 1994
AB We have investigated the inhibitory mechanism of the initial arrest of L5178Y-ML25 lymphoma cells in a target organ (liver) by using recombinant fibronectin fragments with cell- and/or heparin-binding domains (C-274, H-271 or the fusion fragment CH-271). Pretreatment of hepatic sinusoidal endothelial (HSE) cell monolayers with lymphoma cells or their conditioned medium for 4 to 6 h resulted in the enhancement of lymphoma cell adhesion to HSE cell monolayer. The increased tumor adhesiveness was completely abolished by preincubation of the conditioned medium with anti interleukin-1-beta monoclonal antibody (mAb). Synthetic sialyl Le-x (SL-e) as a ligand for endothelial cell leukocyte adhesion molecule-1 (ELAM-1) adhesion receptor and anti ELAM-1 mAb blocked the conditioned medium-induced enhancement of tumor-endothelial cell interaction, while pretreatment of the activated HSE cell monolayer with anti vascular cell adhesion molecule-1 (VCAM-1) mAb did not affect the enhanced tumor cell adhesion. These results indicate that tumor cell interaction with the stimulated HSE cells is mediated by ELAM-1 molecules on HSE cells. However, the expression of SLe-x and SLe-a on the tumor surface was not observed by flow cytometric analysis. ELAM-1-mediated enhancement of tumor cell adhesion to HSE monolayer was also inhibited in a concentration-dependent manner by CH-271 fusion polypeptide or the sulfated chitin derivative sulfated carboxymethyl-chitin, which can bind to the heparin-binding domain of CH-271. In addition, CH-271 inhibited not only tumor-endothelium interaction but also tumor cell invasion into reconstituted basement membrane Matrigel in vitro.
NOT antibody.
CC Cytology - Animal 02506
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Membrane phenomena 10508
Digestive system - Pathology 14006
Blood - Blood cell studies 15004
Blood - Lymphatic tissue and reticuloendothelial system 15008
Neoplasms - Pathology, clinical aspects and systemic effects 24004
IT Major Concepts
Blood and Lymphatics (Transport and Circulation); Cell Biology; Digestive System (Ingestion and Assimilation); Membranes (Cell Biology); Tumor Biology
IT Miscellaneous Descriptors
BASEMENT MEMBRANE; ENDOTHELIAL CELL LEUKOCYTE ADHESION MOLECULE-1; LYMPHOMA CELL ADHESION
ORGN Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
mouse
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

Hideki; Ishizaki, Yukuo; Kato, Ikunoshin; Kiso, Makoto; Hasegawa, Akira; Azuma, Ichiro
CS Dep. Patho-Biochem., Res. Inst. Wakan-yaku, Toyama Med. Pharmaceutical Univ., 2630 Sugitani, Toyama 930-01, Japan
SO Japanese Journal of Cancer Research, (1994) Vol. 85, No. 7, pp. 723-734. CODEN: JJCREP. ISSN: 0910-5050.
DT Article
LA English
ED Entered STN: 24 Oct 1994
Last Updated on STN: 24 Oct 1994
AB We have investigated the inhibitory mechanism of the initial arrest of L5178Y-ML25 lymphoma cells in a target organ (liver) by using recombinant fibronectin fragments with cell- and/or heparin-binding domains (C-274, H-271 or the fusion fragment CH-271). Pretreatment of hepatic sinusoidal endothelial (HSE) cell monolayers with lymphoma cells or their conditioned medium for 4 to 6 h resulted in the enhancement of lymphoma cell adhesion to HSE cell monolayer. The increased tumor adhesiveness was completely abolished by preincubation of the conditioned medium with anti interleukin-1-beta monoclonal antibody (mAb). Synthetic sialyl Le-x (SL-e) as a ligand for endothelial cell leukocyte adhesion molecule-1 (ELAM-1) adhesion receptor and anti ELAM-1 mAb blocked the conditioned medium-induced enhancement of tumor-endothelial cell interaction, while pretreatment of the activated HSE cell monolayer with anti vascular cell adhesion molecule-1 (VCAM-1) mAb did not affect the enhanced tumor cell adhesion. These results indicate that tumor cell interaction with the stimulated HSE cells is mediated by ELAM-1 molecules on HSE cells. However, the expression of SLe-x and SLe-a on the tumor surface was not observed by flow cytometric analysis. ELAM-1-mediated enhancement of tumor cell adhesion to HSE monolayer was also inhibited in a concentration-dependent manner by CH-271 fusion polypeptide or the sulfated chitin derivative sulfated carboxymethyl-chitin, which can bind to the heparin-binding domain of CH-271. In addition, CH-271 inhibited not only tumor-endothelium interaction but also tumor cell invasion into reconstituted basement membrane Matrigel in vitro.

Not inhibited

CC Cytology - Animal 02506
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Membrane phenomena 10508
Digestive system - Pathology 14006
Blood - Blood cell studies 15004
Blood - Lymphatic tissue and reticuloendothelial system 15008
Neoplasms - Pathology, clinical aspects and systemic effects 24004
IT. Major Concepts
Blood and Lymphatics (Transport and Circulation); Cell Biology; Digestive System (Ingestion and Assimilation); Membranes (Cell Biology); Tumor Biology
IT Miscellaneous Descriptors
BASEMENT MEMBRANE; ENDOTHELIAL CELL LEUKOCYTE ADHESION MOLECULE-1; LYMPHOMA CELL ADHESION
ORGN Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
mouse
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

ANSWER 2 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:597809 CAPLUS
DN 127:245083
ED Entered STN: 18 Sep 1997
TI Immunological measurement of malondialdehyde-modified low-density lipoprotein (MDA-LDL)
AU Kotani, Kazuo; Kondo, Akira; Manabe, Mitsuhisa; Maekawa, Masato; Kanno, Takashi
CS Dep. Lab. Med., Hamamatsu Univ. Sch. Med., Hamamatsu, 431-31, Japan
SO Seibutsu Shiryo Bunseki (1997), 20(2), 111-118
CODEN: SSBUEL; ISSN: 0913-3763
PB Seibutsu Shiryo Bunseki Kagakkai
DT Journal
LA Japanese
CC 9-10 (Biochemical Methods)
AB Although oxidized low-d. lipoprotein (LDL) is considered to play a critical role in the pathogenesis of atherosclerosis, the existence of malondialdehyde (MDA)-modified LDL (MDA-LDL) in the circulation has been in dispute. Therefore, for the assessment of oxidized-LDL in human serum, we developed a sensitive enzyme-linked immunosorbent assay (ELISA) for the detection of MDA-LDL. In our method, monoclonal antibody against MDA-LDL, ML25 was used. The competitive EIA technique showed that ML25 recognized MDA-LDL as well as MDA-modified protein, but did not cross-react with proteins modified by 4-hydroxynoneal, glycolaldehyde and caproic aldehyde which considered as highly reactive breakdown products of lipid peroxidn. Therefore, the combination of ML25 with apoB-specific antibody (AB16) as the second antibody allowed us to establish an ELISA method which is specific for detection of MDA-LDL. By using this ELISA system, it was possible to obtain dose-dependent response with MDA-LDL prepared artificially in vitro. MDA-LDL in human serum was not detectable in this ELISA system, unless SDS was included in reaction mixts. These results suggest that the epitopes recognized by ML25 could be exposed by the effects of SDS, which allows the epitope to react with ML25. Under the assay condition, MDA-LDL was detected in 314 healthy individuals. The concentration of MDA-LDL preferably ranged from 20 to 80 units/L when the absorbance with artificially prepared MDA-LDL at the concentration of 1 mg/L was defined as 1 unit/L. We concluded that out method is useful for studying the possible role of serum MDA-LDL in the pathogenesis of atherosclerosis and might be an evaluation method for atherogenicity.
ST immunol malondialdehyde LDL lipoprotein
IT Immunoassay
(enzyme-linked immunosorbent assay; immunol. measurement of malondialdehyde-modified low-d. lipoprotein (MDA-LDL))
IT Lipoproteins
RL: ANT (Analyte); ANST (Analytical study)
(low-d., malondialdehyde-modified; immunol. measurement of malondialdehyde-modified low-d. lipoprotein (MDA-LDL))
IT Lipoproteins
RL: ANT (Analyte); ANST (Analytical study)
(low-d., oxidized; immunol. measurement of malondialdehyde-modified low-d. lipoprotein (MDA-LDL))

ANSWER 2 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:597809 CAPLUS
DN 127:245083
ED Entered STN: 18 Sep 1997
TI Immunological measurement of malondialdehyde-modified low-density lipoprotein (MDA-LDL)
AU Kotani, Kazuo; Kondo, Akira; Manabe, Mitsuhisa; Maekawa, Masato; Kanno, Takashi
CS Dep. Lab. Med., Hamamatsu Univ. Sch. Med., Hamamatsu, 431-31, Japan
SO Seibutsu Shiryo Bunseki (1997), 20(2), 111-118
CODEN: SSBUEL; ISSN: 0913-3763
PB Seibutsu Shiryo Bunseki Kagakkai
DT Journal
LA Japanese
CC 9-10 (Biochemical Methods)
AB Although oxidized low-d. lipoprotein (LDL) is considered to play a critical role in the pathogenesis of atherosclerosis, the existence of malondialdehyde (MDA)-modified LDL (MDA-LDL) in the circulation has been in dispute. Therefore, for the assessment of oxidized-LDL in human serum, we developed a sensitive enzyme-linked immunosorbent assay (ELISA) for the detection of MDA-LDL. In our method, monoclonal antibody against MDA-LDL, ML25 was used. The competitive EIA technique showed that ML25 recognized MDA-LDL as well as MDA-modified protein, but did not cross-react with proteins modified by 4-hydroxynoneal, glycolaldehyde and caproic aldehyde which considered as highly reactive breakdown products of lipid peroxidn. Therefore, the combination of ML25 with apoB-specific antibody (AB16) as the second antibody allowed us to establish an ELISA method which is specific for detection of MDA-LDL. By using this ELISA system, it was possible to obtain dose-dependent response with MDA-LDL prepared artificially in vitro. MDA-LDL in human serum was not detectable in this ELISA system, unless SDS was included in reaction mixts. These results suggest that the epitopes recognized by ML25 could be exposed by the effects of SDS, which allows the epitope to react with ML25. Under the assay condition, MDA-LDL was detected in 314 healthy individuals. The concentration of MDA-LDL preferably ranged from 20 to 80 units/L when the absorbance with artificially prepared MDA-LDL at the concentration of 1 mg/L was defined as 1 unit/L. We concluded that out method is useful for studying the possible role of serum MDA-LDL in the pathogenesis of atherosclerosis and might be an evaluation method for atherogenicity.
ST immunol malondialdehyde LDL lipoprotein
IT Immunoassay
(enzyme-linked immunosorbent assay; immunol. measurement of malondialdehyde-modified low-d. lipoprotein (MDA-LDL))
IT Lipoproteins
RL: ANT (Analyte); ANST (Analytical study)
(low-d., malondialdehyde-modified; immunol. measurement of malondialdehyde-modified low-d. lipoprotein (MDA-LDL))
IT Lipoproteins
RL: ANT (Analyte); ANST (Analytical study)
(low-d., oxidized; immunol. measurement of malondialdehyde-modified low-d. lipoprotein (MDA-LDL))

ANSWER 1 OF 7 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 1
AN 2002:413901 BIOSIS
DN PREV200200413901
TI Single LDL apheresis improves serum remnant-like particle-cholesterol, C-reactive protein, and malondialdehyde-modified-low-density lipoprotein concentrations in Japanese hypercholesterolemic subjects.
AU Kobayashi, Junji [Reprint author]; Katsube, Susumu; Shimoda, Mayumi; Furuhashi, Kenji; Kitano, Shouichi; Masuda, Mizue; Maruyama, Tokiko; Shinomiya, Masaki
CS Department of Internal Medicine, Chibaken Saiseikai Narashino Hospital, 1-1-1 Izumi Chou, Narashino, Chiba, 275-0006, Japan
maryland95@angel.ne.jp
SO Clinica Chimica Acta, (July, 2002) Vol. 321, No. 1-2, pp. 107-112. print.
CODEN: CCATAR. ISSN: 0009-8981.
DT Article
LA English
ED Entered STN: 31 Jul 2002
Last Updated on STN: 31 Jul 2002
AB Background: Single low-density lipoprotein (LDL)-apheresis may affect serum remnant-like particle-cholesterol (RLP-C), C-reactive protein (CRP) and malondialdehyde-modified (MDA)-LDL concentrations. Subjects and methods: Six subjects with hypercholesterolemia (five men, one woman) were involved in this study. Mean age and body mass index of the study subjects were 58+-3.1 years and 23.6+-2.07 kg/m2, respectively. Five of the subjects were diagnosed as heterozygous familial hypercholesterolemia (FH) because of having both marked hypercholesterolemia and Achilles tendon xanthomas. LDL apheresis was introduced and continued using a dextran sulfate cellulose adsorption column technique every 2 weeks. Serum RLP-C was measured using an immunoaffinity mixed gel containing anti-apolipoprotein A-I and anti-apolipoprotein B monoclonal antibody. Serum CRP was measured by latex-enhanced assay. Serum MDA-LDL was measured using monoclonal antibody against MDA-LDL ( ML25). Results: Combined treatment in the steady state pre-treatment yielded a total, LDL- and HDL-cholesterol, and TG concentrations of 5.39+-0.81, 3.82+-1.03, 1.24+-0.29 and 0.92+-0.43 mmol/l, respectively, and a post-treatment total, LDL- and HDL-cholesterol and TG concentrations of 2.79+-0.37 (-48%, p<0.001), 1.63+-0.29 (-57%, p<0.001), 1.18+-0.26 (-5%, NS) and 0.23+-0.11 mmol/l (-75%, p<0.001), respectively. Serum RLP-C and CRP concentrations showed a substantial reduction (-73%, p<0.05 for RLP-C; -56%, p<0.05 for CRP) during this procedure. In addition, LDL apheresis was found to also cause a marked reduction in serum MDA-LDL concentration (-61%, p<0.05). Conclusion: LDL-apheresis is an effective treatment for removing atherogenic factors RLP-C, CRP and MDA-LDL from sera.
CC Genetics - Human 03508
Clinical biochemistry - General methods and applications 10006
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biochemistry studies - Sterols and steroids 10067
Pathology - General 12502
Pathology - Therapy 12512
Metabolism - General metabolism and metabolic pathways 13002
Metabolism - Metabolic disorders 13020
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
IT Major Concepts
Clinical Chemistry (Allied Medical Sciences); Human Medicine (Medical Sciences); Metabolism; Methods and Techniques
IT Parts, Structures, & Systems of Organisms
serum: blood and lymphatics
IT Diseases
familial hypercholesterolemia: genetic disease, metabolic disease
Hypercholesterolemia, Familial (MeSH)